

Oral History Program: Biographical Notes

Thomas Grandin CHAPMAN (1927 -)
Civil Engineer

Birth & Family: Born 21 April 1927 in Shanghai. Father an Educational Missionary who taught Science and Maths in a Methodist College. Before his birth, Chapman's parents were forcibly evacuated by British gunboat from Wen Chow and taken to Shanghai due to Chinese Communists coming from south. Shortly after his birth, the family returned to Jersey, where they remained for 4 years. They then went back to China, but Chapman had to return to Jersey due to illness (*Do we know how old he was – did he go back on his own etc?*). One brother. (*Have made changes because we had three “returned” in three lines*).

Education: Attended the only public school on Jersey, ??? College, then accepted into his father's alma mater, Leeds University, in October 1945.

Qualifications: BSc(Leeds), PhD(Southampton), Emeritus Professor, University of New South Wales.

Memberships: FIEAust; Member, American Geophysical Union; Member, International Water Resources Association; Member, National Ground Water Association, USA; Foundation Member, New Zealand Hydrological Society; Member, Australian Water and Wastewater Association.

Awards:

Work History: Aware of great opportunities for engineers in Australia, Chapman sought a position with the State Rivers & Water Supply in Victoria. When this fell through, he accepted a position with the Commonwealth Department of Works & Housing and sailed for Australia, arriving on Australia Day 1949.

Chapman was assigned to the Head Office of Works & Housing, in the Aerodromes and Roads Section, working in the laboratory, testing mainly soils and concrete, but later specialised in bituminous materials. Many new airports were being built using techniques designed especially for Australian conditions. He took part in site investigations for West Beach Airport that was built on very marshy land; the test strip done for this project provided the basis for the design of future airports built on areas with very low [????] ratios. Chapman was responsible for building the first bituminous concrete in Australia - the east-west runway at Sydney Airport, which also involved the re-routing of the Cook's River.

In 1953 Chapman and his wife and children returned to England to visit family. Although he had acquired an Associate Membership of IEAust, London consultancy firms did not recognise this qualification. He successfully applied for a lectureship in Hydraulics at Southampton University, which had just become an independent University. As one of three lecturers in the Civil Engineering Department, and being the only lecturer in Hydraulics, he was also responsible for the setting up and design of the hydraulics laboratory. He combined his two interests –

soils and hydraulics - in studying the hydraulics of groundwater water flow as the subject of his PhD. During this period, Chapman realised his interests lay more in research than teaching, and having completed his PhD, he and his wife decided to return to Australia. While still in England, he successfully applied for a position with the CSIRO as a Hydrologist with Land Research and Regional Survey involving field studies in the remote areas of Australia.

In 1957 Chapman and his family returned to Australia, where they were based in Canberra. During 1957-1971 he initiated studies in regional hydrology and took part in fieldwork in Western Australia, Cape York Peninsula, Hunter Valley and Central Australia. Chapman also established a hydrology group that developed equipment for data acquisition and computer processing, undertook field studies, (particularly in low rainfall areas) and developed linear systems and process model approaches to catchment hydrology.

The group achieved recognition by most Australian water authorities in the use of its analogue-digital conversion units and digital field recorders and was selected as the central analysis group for the Australian Representative Basins Program by the Australian Water Resources Council. He was also leader of the Division's natural resources research group of 22 scientists, concerned with the development of techniques for rapid assessment of land potential.

By 1971 Chapman was finding little stimulation in his work with the CSIRO which had become more or less a managerial role, so decided to return to research and accepted the position as Professor of Engineering in the Faculty of Military Studies, University of New South Wales at Duntroon, ACT, at a time when the faculty was moving towards a full 4-year BE degree. A highlight was the field trip on which he accompanied students to Papua New Guinea to do site investigations on soil testing and surveying. He also developed and set up the laboratories at Duntroon during his time there.

Although Chapman enjoyed his time at Duntroon, he took the opportunity to join the main campus in Kensington in 1981 as Chair of Water Engineering, University of New South Wales, where he found that the staff and students were far less motivated than those at Duntroon. He was responsible for the administration of the Department of Water Engineering and later became Head of School, at the same time publishing papers and following his own research interests which included, amongst others, the hydraulics of shallow groundwater systems.

Chapman retired from the University in June 1987, and went to Sweden for three months where he was involved with a UNESCO working group on developing a textbook on Comparative Hydrology which would show the similarities between hydrology in different parts of the world, thereby addressing the problem of water resource projects being set up in inappropriate local situations in under-developed countries, by consultants from developed countries.

On returning to Australia Chapman successfully applied for a position as Engineer, Class 2, Alligator Rivers Region Unit, Department of Mines and Energy in Darwin, Northern Territory, where his main responsibility was the analysis of hydrological data on a range of projects.

Following his *(is it possible to briefly mention what happened to his first marriage so the following will be in context?)* remarriage, Chapman and his wife returned to Sydney in 1988; at the time of his oral history

interview he was an Emeritus Professor of the University of New South Wales, involved in various research projects.

Prepared by Jill Willis, September 2003 from oral history interview conducted by Paul Tinslay on 10.03.1998.